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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,227

09/25/2006

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EXAMINER

ARBES, CARL J

ART UNIT

PAPER NUMBER

3729

MAIL DATE

DELIVERY MODE

08/18/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,227	Applicant(s) KANO ET AL.	
	Examiner C. J. Arbes	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-7, 11-13, 15, 16, 18, 19 and 21-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-10, 14, 17 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>herein</u> . | 6) <input type="checkbox"/> Other: _____ |

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-10, 14, 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibbitson et al (Pat Doc. 2005/0112369 A1); hereinafter Ibbitson et al.. Ibbitson et al teach a method of making of enhancing adhesion between a metal surface and an organic polymeric material in the manufacture of circuit boards.(Cf. Abstract) The useful polymeric materials contain at least one multiethylenically unsaturated monomer and at least one unsaturated water soluble monomer. One example of such a material is divinylpyridine (Cf. page 2). Nitrogen-containing compounds and their thio-analogs are useful for the unsaturated monomers and can include vinylpyridines. When the metal is copper a functional group may include nitrogen-containing moieties and in particular amines and nitrogen-containing heterocyclic moieties (Cf. page 4). Linear polymers such as acrylate esters, methylacrylate esters. (Cf. page 6) The metal e.g. copper may be patterned well known in the art (Cf. page 7). It would have been obvious to form a conductive film and to apply energy using the compounds recited in said claim 5 and reduce the metal ion to a metal salt inasmuch since Ibbitson et al discloses the benefits of using at least one of the moieties viz. nitrogen-containing heteroaromatic moiety for this purpose. As applied to claim 9 is is old, and hence obvious for one in this art to increase the thickness and electrical current capacity of the conductive film by electroplating after the electroless plating process. As applied to claim 10 it is held to be

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mere design choice to apply the conductive film on both sides or surfaces of a substrate inasmuch as applicants provide no particular purpose therefore nor do they solved specific problems therewith. As applied to claim 17 it is old and hence obvious to etch the conductive film to obtain a conductive pattern. As applied to claim 20 it is held to have been old to form a multilayered wiring board and to connect at least 2 metal layers with a metal layer electrically.

Claim 20 is further rejected under 35 U.S.C. 103(a) as being unpatentable over Siefker (Pat. No. 3,867,759) in view of Ibbitson et al. or vice versa.

Siefker teaches a method of making a multilayered circuit boards. The boards are drilled and plated in order to electrically connect at least 2 metal layers. It would have been obvious to combine the 2 teachings and to conductively connect at least 2 metal layers using the process taught by Ibbitson et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. J. Arbes whose telephone number is 571-272-4563. The examiner can normally be reached on M, T, R and F from 8 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Banks, can be reached on (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/C. J. Arbes/

Primary Examiner, Art Unit 3729